MANCHESTER ELEMENTARY MIDDLE SCHOOL
PEDESTRIAN ACCESS
SCOPING STUDY

MANCHESTER STP BP13(18)

Spring 2016

DUFRESNE GROUP CONSULTING ENGINEERS

BCRC Bennington County Regional Commission

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PROJECT PURPOSE AND NEED STATEMENT

Purpose

The project's purpose is to create safe pedestrian access to the Manchester Elementary Middle School (MEMS), a school of approximately 400 students.

Need

There are several deficiencies in the project area that make walking to MEMS unsafe.

1) Lack of sidewalks on School Street

There are no sidewalks on School Street between Bonnet Street and MEMS. School Street is used to access MEMS from Bonnet Street/VT 30. Many parents stated at the Local Concerns Meeting that it is not safe for their children to walk to MEMS because School Street lacks sidewalks.

2) There is no crosswalk across Bonnet Street to reach School Street.

3) Unsafe Pedestrian Crossing at Main Street/VT7A//Memorial Avenue

The crosswalk across Main Street/VT 7A to Memorial Avenue is a primary crossing location to reach MEMS. Main Street is busy, particularly during school arrival and dismissal times. The crossing is unsafe because vehicles parked just north of the crosswalk obscure approaching drivers' view of the crosswalk. In addition, the crossing is unnecessarily long because it crosses parking lanes on both sides of the street, and because it crosses at a slight angle – not at 90 degrees to the road.

Also, diagonal parking on the east side of the street blocks the view of the crosswalk for drivers approaching from the south.

The crosswalk across Memorial Avenue is also not safe because it is within the driveway access to a gas station.

The north side of School Street has a stone retaining wall and most of the street's utility poles.

There are no sidewalks on School Street. Students who wish to walk to school must walk in the street.

There is no crosswalk across Bonnet Street to reach School Street. The crossing distance is about 40 feet.

The crosswalk across Main Street/ VT7A is a primary crossing location to reach MEMS. Vehicles parked north of the crosswalk obscure approaching drivers' view of pedestrians.

Large vehicles parked in the diagonal parking spaces on the east side of Main Street/VT7A obscure northbound drivers' view of the crosswalk.

The crosswalk across Memorial Avenue lands in a gas station driveway access.

Project Study Area

The study area was defined by the Project Steering Committee, which includes representatives from the Town of Manchester, the Manchester Elementary and Middle School (MEMS) and the Bennington County Regional Commission (BCRC). As shown in Figure 1, the project study area includes two areas as follows: School Street, from Bonnet Street to Memorial Avenue, and the intersection of Main Street (Route 7A) and Memorial Avenue.

Land Uses

The School Street area is zoned as General Residential. This zoning district is characterized by a mix of residential, professional and light commercial uses and serves as a transition area between commercial downtown and the outlying residential areas. The Town Plan encourages development in this district compatible with the commercial and downtown areas, while maintaining a more residential character.

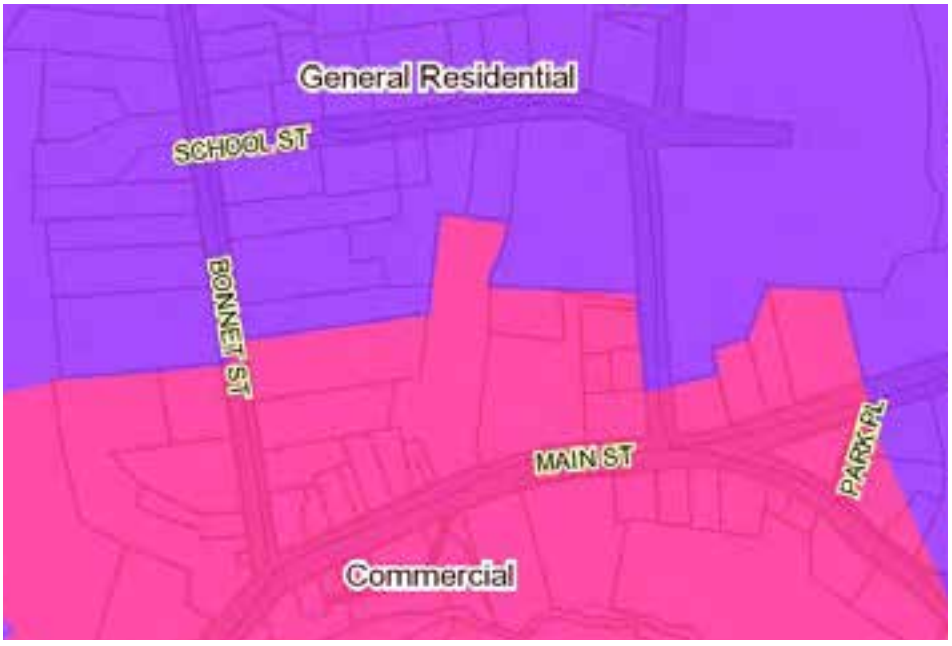
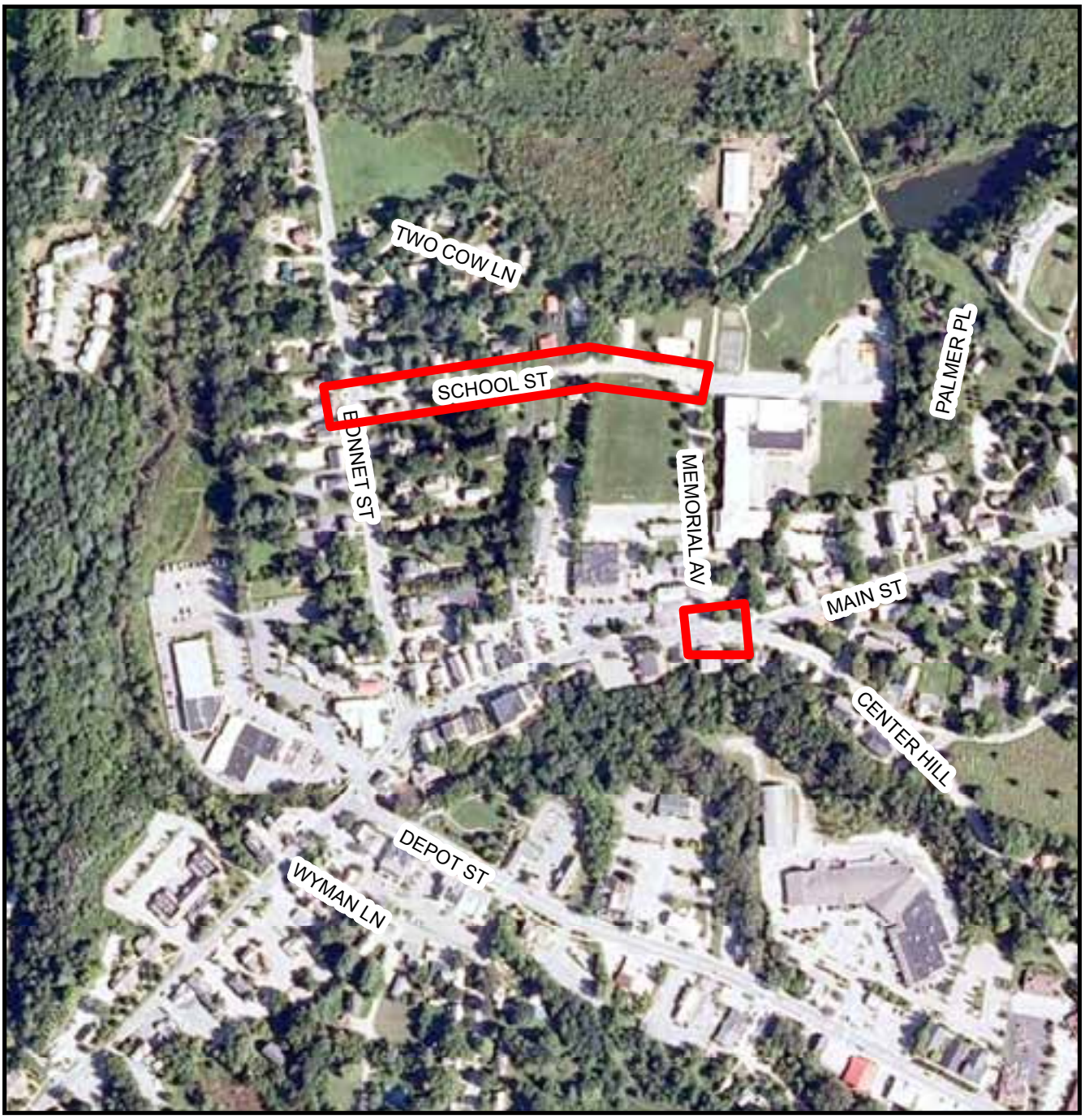


Figure 2: Zoning Map

The area of Main Street included in this study is zoned as Commercial and is characterized by a mix of commercial, professional, residential and service uses. According to the Town Plan, the Commercial District is ideally connected in pedestrian

FIGURE 1
LOCATION MAP



N

0 200 400 800 Feet

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and bicycle friendly ways and one of the goals for this district is to continue to improve vehicular and pedestrian circulation and pedestrian and cycling amenities.

Existing Transportation Facilities

The study area is centered on School Street; however it also includes the intersection of Bonnet Street and School Street as well as the intersection of Main Street and Memorial Avenue. The characteristics of the roads in the study area are shown in Table 1. The speed limit on all roads in the study area is 25 mph.

TABLE 1
EXISTING ROADWAY CHARACTERISTICS
MEMS PEDESTRIAN ACCESS SCOPING STUDY
MANCHESTER STP BP13(18)
MANCHESTER, VERMONT
February 4, 2015

Road Name	Type	Travel Lane Width	Shoulders	Parking Lane	Sidewalks
School Street	Local Road	10 ft	Unmarked, minimal	No	No
Bonnet Street	Minor Arterial	11 ft	Unmarked, minimal	Parallel, both sides	Both sides
Main Street	Major Collector	11 ft	Unmarked, wide	Angled, south side	Both sides
Memorial Avenue	Local Road	11 ft	Unmarked, minimal	No	East side

According to Vermont Agency of Transportation (VTrans) data, the 2012 Annual Average Daily Traffic was as follows:

- Bonnet Street (Route 30) – Main Street and School Street – 7,700
- Bonnet Street (Route 30) – School Street and Manchester Village Line – 4,600
- Main Street (Route 7A) – Bonnet Street and Memorial Ave – 6,600
- Main Street (Route 7A) – Memorial Ave and Barnumville Road – 6,900

There was no traffic count data available for School Street or Memorial Avenue.

Data was obtained from VTrans for high crash locations compiled for the 2008-2012 period. There are no high crash locations within the project area. According to the VTrans General Yearly Crash Listing, there were 7 accidents on Main Street within 200 feet of the intersection with Memorial Avenue, 1 accident on Bonnet Street within 200 feet of the intersection with School Street and 1 accident on Memorial Avenue at the intersection with Main Street.

There are no existing pedestrian facilities on School Street. There are existing sidewalks on both sides of Bonnet Street and Main Street at the study locations and along the east side of Memorial Avenue. There are existing crosswalks across School Street at the intersection with Bonnet Street and across both roads at the intersection of Memorial Avenue and Main Street. The Main Street crossing is very long due to the parking lanes on both sides of the street. It is also difficult for a driver moving west to see a person standing on the north side of Main Street waiting to cross due to the frequent use of the parking lane along the north side of Main Street, east of the intersection.

The Town and MEMS are currently in the conceptual design phase of a separate project to improve Memorial Avenue, which may include a redesign of the School Street and Memorial Avenue intersection and new sidewalk and angled parking along the west side of Memorial Avenue. The intersection redesign would likely create a four-way stop and eliminate the sweeping turn from School Street to Memorial Avenue.

Natural and Cultural Resources

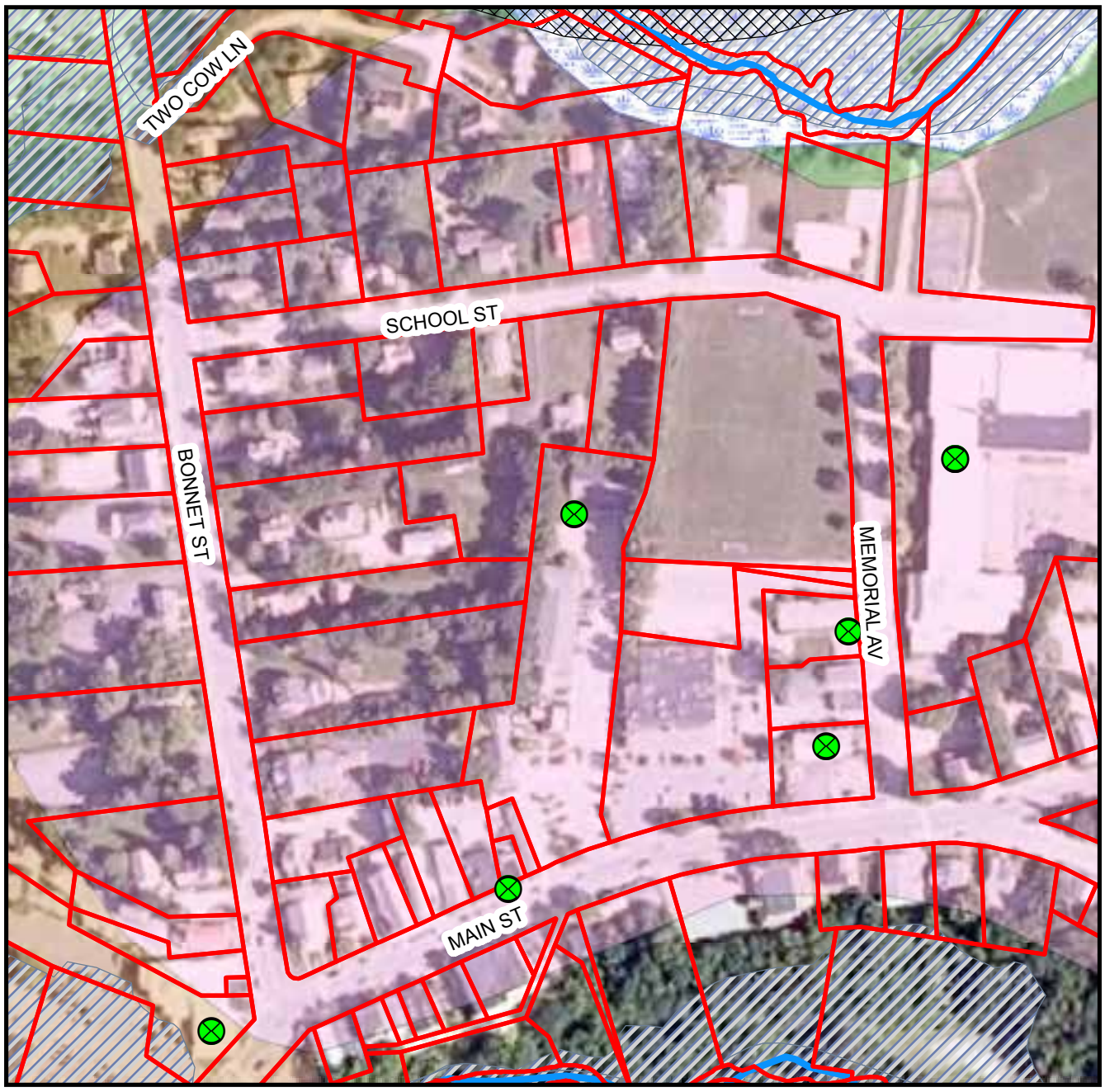
The following Geographical Information System (GIS) data was compiled from the Agency of Natural Resources and the Vermont Center for Geographic Information:

- Wetlands
- Surface Water
- Floodplains
- Endangered Species
- Flora/Fauna
- Stormwater
- Hazardous Wastes
- Forest Land
- Agricultural Land
- Public Land

The GIS mapping is shown in Figure 3. While there are several resources near the study area, the only mapped resource within the study area is Statewide agricultural soil. However, as the pedestrian improvements would be located directly adjacent to the edge of the road and within the Town right-of-way, the soils impacted would likely be previously disturbed soils. Based on discussions with the Vermont Agency of Agriculture, the sidewalk project would have no impact to the agricultural soils. The correspondence with the Agency of Agriculture is included in Appendix A for reference.

An Archaeological and Cultural Resource Assessment was not completed as part of this study. As the pedestrian improvements will likely be located within previously disturbed areas and since the area is not part of a historic district, it is unlikely that there will be historic or archeological impacts.

FIGURE 3
NATURAL RESOURCES AND ENVIRONMENTAL FEATURES



Legend

- Parcels (Tax Map)
- Stream
- Hazardous Waste Site
- RTE Species
- FEMA Flood Zone
- Wetland
- Prime Ag Soil
- Statewide Soil
- Statewide (b) Soil

N

0 100 200 400 Feet

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Right-of-Way

The public road right-of-way (ROW) width for School Street varies. The ROW width between Memorial Avenue and the eastern edge of the 102 School Street property is 33 feet, or 2 rods. The ROW width between Bonnet Street and the eastern edge of the 102 School Street property could not be accurately determined. The surveyor performing the ROW research indicated that it could be assumed to match the eastern portion of School Street at 2 rods, however there was no documentation to support this assumption. As such, the surveyor recommended using a ROW width of 49.5 feet, or 3 rods, which would need to be verified in the final design phase by attempting to locate field monuments. The public road ROW width for Main Street is 66 feet, or 4 rods. The property boundaries for the parcels adjacent to the study area are shown in Figure 4.

Utilities

There are multiple utilities within the study area including the following:

- Municipal water system along the north side of School Street, the west side of Bonnet Street, the north side of Main Street and the east side of Memorial Avenue.
- Municipal sewer system at the intersection of School Street and Memorial Street and along the east side of Bonnet Street.
- Municipal storm drain system along Bonnet Street.
- Utility poles throughout the project area.

The utility poles and drain structures are shown in Figure 5. The underground municipal utility systems are not expected to be impacted by the proposed sidewalk alignments as the sidewalk construction work is typically limited to a depth of about 18-inches and the water and sewer mains are typically at least 5 feet deep.

TM#32-50-39
James R. & Holly H. O'Brien
39 School Street
Manchester Center, VT 05255
(39 School Street)
Bk-155, Pg-146 (Survey on File at On Point Land Surveying)

TM#32-50-43
Benjamin & Carol Beers
99 School Street
Manchester Center, VT 05255
(99 School Street)
Bk-126, Pg-139

TM#32-50-45
Mt. Equinox Grange INC.
C/o Janice Gould
2472 Sunderland Hill Rd
Arlington, VT 05250-9752
(131 School Street)
Bk-37, Pg-491 & Bk-53, Pg-128
Excluding Bk-55, Pg-391 (ROW to Town) & Bk-54, Pg-163 (Land to New England Telephone and Telegraph Company)

TM#32-50-46
Telephone Operating Co. of Vermont LLC.
P.O. Box 1659
Bangor, ME 04402-1659
(157 School Street)
Bk-280, Pg-906

MEMORIAL AVENUE EXT.

TM#32-50-32
Town of Manchester School District
P.O. Box 1526
Manchester Center, VT 05255
(80 Memorial Avenue)
Bk-83, Pg-388 & Bk-83, Pg-387 & Bk-71, Pg-454 & Bk-52, Pg-298
(See map 202 and Selectboard minutes June 15, 1945)

TM#32-50-38
John Whalen II &
Marilyn F. Hand Trustee
P.O. Box 1169
Manchester Center, VT 05255
(170 Bonnet Street)
Bk-183, Pg-64

TM#32-50-41
Edward H. Hopkins
3617 Richville Road
Manchester Center, VT 05255
(47 School Street)
Bk-272, Pg-491 & Bk-156, Pg-123

TM#32-50-42
Bernard J. & Kathy F. Boudreau
77 School Street
Manchester Center, VT 05255
(77 School Street)
Bk-186, Pg-24

TM#32-50-44
School Street Associates
C/o Spicer Associates
113 School Street
Manchester Center, VT 05255
(113 School Street)
Bk-159, Pg-75

SCHOOL STREET
Unknown width of R-O-W
Check against existing field monumentation or if not recoverable use state statue of 49.5'

MEMORIAL AVENUE
33' Wide R-O-W
(See Bk-43, Pg-199&201)

BONNET STREET

TM#32-50-72
Brewster Family Trust
P.O. Box 1246
Manchester Center, VT 05255
(152 Bonnet Street)
Bk-315, Pg-56 (See survey on file from Parks Associates)

TM#32-50-71
Frank J. Sutton
P.O. Box 142
Manchester Center, VT 05255
(50 School Street)
Bk-81, Pg-337

TM#32-50-49
Joyce C. Scribner & Susan L. Salo
P.O. Box 149
Manchester Center, VT 05255
(82 School Street)
Bk-193, Pg-118

TM#32-50-47
Alberta Harrington Life Estate
102 School Street
Manchester Center, VT 05255
(102 School Street)
Bk-307, Pg-701

TM#32-50-48
Claudet Boudreau
80 School Street
Manchester Center, VT 05255
(80 School Street)
Bk-171, Pg-74

TM#32-50-32
Town of Manchester School District
P.O. Box 1526
Manchester Center, VT 05255
(80 Memorial Avenue)
Bk-83, Pg-388 & Bk-83, Pg-387 & Bk-71, Pg-454 & Bk-52, Pg-298
(See map 202 and Selectboard minutes June 15, 1945)

MEMORIAL AVENUE
49.5' Wide R-O-W
(See Bk-35, Pg-52)

TM#32-50-32
Town of Manchester School District
P.O. Box 1526
Manchester Center, VT 05255
(80 Memorial Avenue)
Bk-83, Pg-388 & Bk-83, Pg-387 & Bk-71, Pg-454 & Bk-52, Pg-298
(See map 202 and Selectboard minutes June 15, 1945)

MAIN STREET
66' Wide R-O-W
(See Bk-5, Pg-218)

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)

FILE: M:\CADD Files\Manchester VT\Civil Projects\MEMS Scoping Study\xref\14-85 School St.dwg Feb 10, 2015 - 3:41pm

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Home page: www.dufresnegroup.com

Project #	7140033
Project Mgr.	C.M.HASKINS
Design	C.M.HASKINS
Drawn	R.DOWNEY
Checked by	R.DOWNEY
Date	FEB 2015
Scale	1"=100'
Approved by	R.DOWNEY

MEMS PEDESTRIAN ACCESS SCOPING STUDY
MANCHESTER STP BP13(18)

FIGURE 4
RIGHT-OF-WAY MAPPING

MANCHESTER, VERMONT

FIG 4

DWG. NO. 14-85 School St.dwg

SHEET 1 OF 1

FIGURE 5
UTILITY STRUCTURES

Legend

- Utility Pole
- Drainage

N

0 100 200 400 Feet

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No Build Alternative

The "no build" alternative must be considered for all projects funded by the Federal Highway Administrative Act to comply with the National Environmental Policy Act (NEPA). The "no build" alternative would consist of doing nothing. There would be no construction, no signage installed and no pavement markings installed. The "no build" alternative will be considered in the alternative comparison for each of the project locations discussed below.

Bonnet Street Crossing

Alternative 1

This alternative includes installing ADA compliant ramps and landings on both sides of Bonnet Street, south of School Street, with a painted crosswalk across Bonnet Street, as shown in Figure 1. The ramps and landings would be constructed with concrete. The existing granite curb would be removed and reset as required. In this scenario, the crosswalk across Bonnet Street would be approximately 40 feet long in order to cross the two travel lanes and two parking lanes.

Crosswalk signage would be installed at the crosswalk in both vehicular travel directions. In the southbound direction, advanced warning signage would also be installed approximately 300-400 feet north of the crosswalk. Advance warning signs are recommended for southbound traffic, which is coming from a more rural area and may not expect a crosswalk. In comparison, the northbound traffic is coming from the downtown area where crosswalks are present.

The preliminary construction cost estimate for this alternative is presented in Table 1. As shown, the preliminary construction cost estimate for Alternative 1 is $15,000 in 2016 dollars, which includes a 20% contingency.

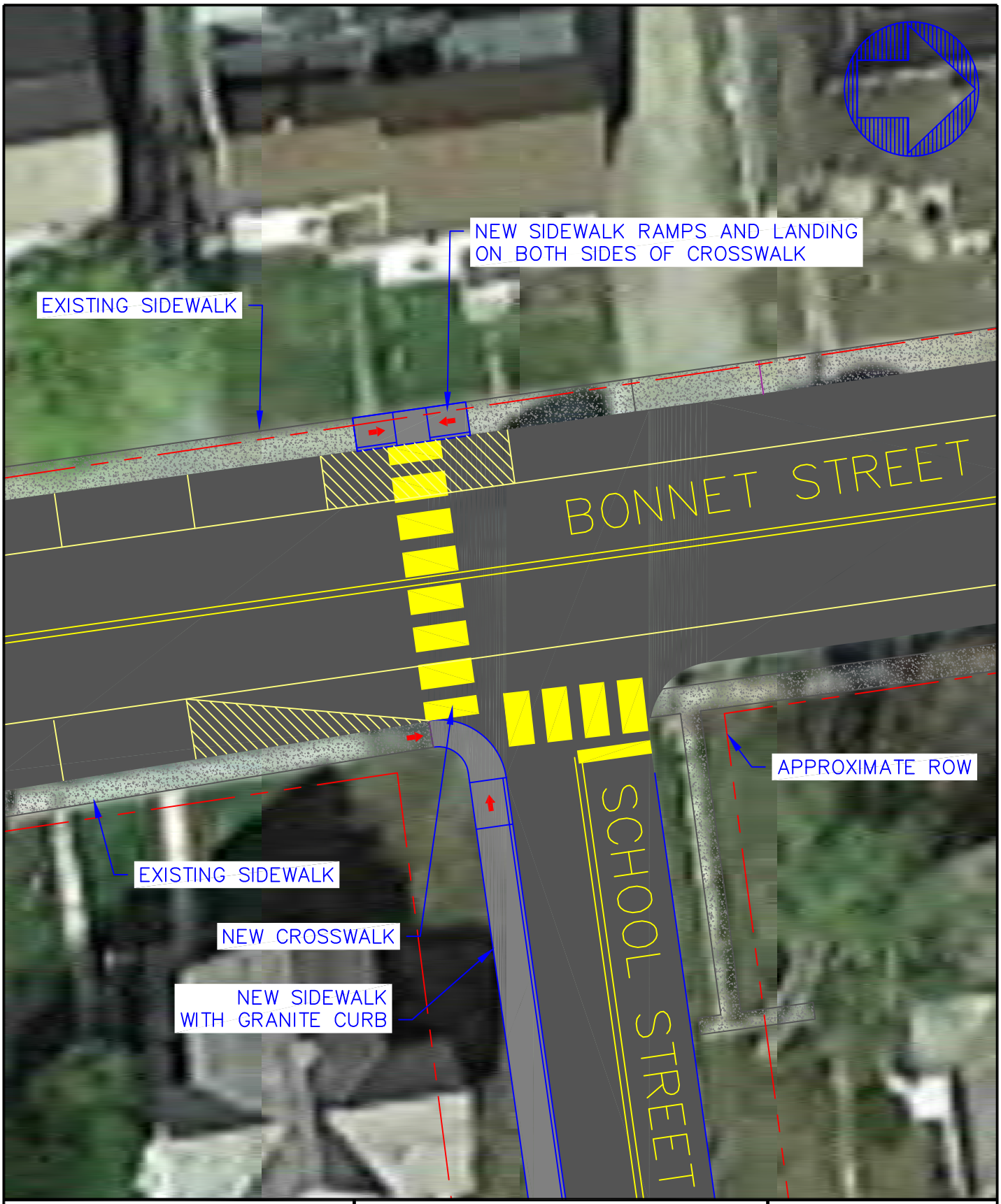

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FIGURE 1

BONNET STREET CROSSING ALTERNATIVE 1

MANCHESTER, VERMONT

PROJECT NO. 7140033
PROJECT MJR. CMH
SCALE 1"=20"
DATE MAR 2016
DRAWING NO. CONCEPT.DWG

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TABLE 1
PRELIMINARY CONSTRUCTION COST ESTIMATE
BONNET STREET – ALTERNATIVE 1
MANCHESTER, VERMONT
March 31, 2016

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stumps	LS	1	$ 500.00	$ 500.00
203.16	Solid Rock Excavation	CY	3	$ 60.00	$ 180.00
406.25	Bituminous Concrete Pavement	TON	2	$ 115.00	$ 230.00
618.30	Detectable Warning Surface	SF	20	$ 45.00	$ 900.00
630.10	Uniformed Traffic Officers	HR	25	$ 67.00	$ 1,675.00
630.15	Flaggers	HR	25	$ 27.00	$ 675.00
635.11	Mobilization/Demobilization	LS	1	$ 1,595.00	$ 1,595.00
641.10	Traffic Control	LS	1	$ 2,500.00	$ 2,500.00
646.500	Durable Crosswalk Marking	LF	41	$ 15.00	$ 615.00
675.20	Traffic Signs, Type A	SF	25	$ 15.00	$ 375.00
675.341	Square Tube Post and Anchor	LF	33	$ 10.00	$ 330.00
900.640	Granite Curb	LF	21	$ 25.00	$ 525.00
900.645	Class A Restoration of Growth	LS	1	$ 500.00	$ 500.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	19	$ 100.00	$ 1,900.00
	SubTotal Construction Cost				$ 12,500.00
	Contingencies (20%)				$ 2,500.00
	Total Construction Cost				**$ 15,000.00**

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

Alternative 2

This alternative includes installing curb extensions with ADA compliant ramps and landings on both sides of Bonnet Street, south of School Street, with a painted crosswalk across Bonnet Street, as shown in Figure 2. The curb extensions would be constructed with granite curb and concrete sidewalk. In this scenario, the crosswalk across Bonnet Street would be approximately 25 feet long crossing two travel lanes.

Crosswalk signage would be installed as described in Alternative 1.

The preliminary construction cost estimate for this alternative is presented in Table 2. As shown, the preliminary construction cost estimate for Alternative 2 is $25,000 in 2016 dollars, which includes a 20% contingency.

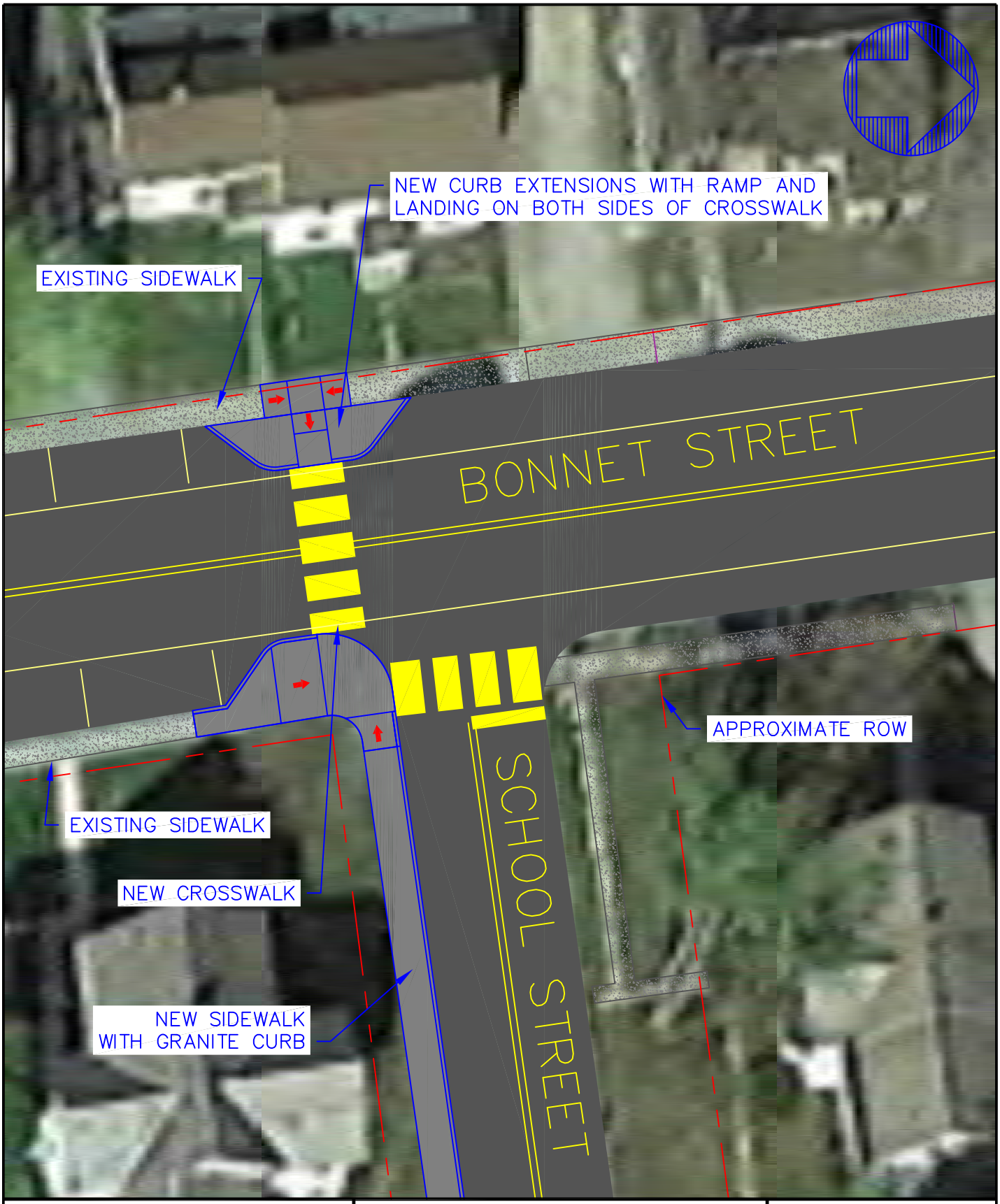

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FIGURE 2

BONNET STREET AND SCHOOL STREET INTERSECTION ALTERNATIVE 2

MANCHESTER, VERMONT

PROJECT NO. 7140033
PROJECT MJR. CMH
SCALE 1"=20"
DATE MAR 2016
DRAWING NO. CONCEPT.DWG

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TABLE 2
PRELIMINARY CONSTRUCTION COST ESTIMATE
BONNET STREET – ALTERNATIVE 2
MANCHESTER, VERMONT
March 31, 2016

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stump	LS	1	$ 500.00	$ 500.00
203.16	Solid Rock Excavation	CY	4	$ 60.00	$ 240.00
406.25	Bituminous Concrete Pavement	TON	3	$ 115.00	$ 345.00
618.30	Detectable Warning Surface	SF	20	$ 45.00	$ 900.00
630.10	Uniformed Traffic Officers	HR	50	$ 67.00	$ 3,350.00
630.15	Flaggers	HR	50	$ 27.00	$ 1,350.00
635.11	Mobilization/Demobilization	LS	1	$ 2,610.00	$ 2,610.00
641.10	Traffic Control	LS	1	$ 2,500.00	$ 2,500.00
646.500	Durable Crosswalk Marking	LF	25	$ 15.00	$ 375.00
675.20	Traffic Signs, Type A	SF	25	$ 15.00	$ 375.00
675.341	Square Tube Post and Anchor	LF	33	$ 10.00	$ 330.00
900.640	Granite Curb	LF	61	$ 25.00	$ 1,525.00
900.645	Class A Restoration of Growth	LS	1	$ 500.00	$ 500.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	59	$ 100.00	$ 5,900.00
	SubTotal Construction Cost				$ 20,800.00
	Contingencies (20%)				$ 4,200.00
	Total Construction Cost				**$ 25,000.00**

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

Alternative Comparison

The painted crosswalk and signage in Alternative 1 provide a visual indication to drivers that pedestrians may be crossing the street at this location. This is an improvement to the existing condition, which does not include any crosswalk or pedestrian crossing signage. However, this alternative does not significantly improve the safety of the Bonnet Street crossing because the length of the crossing is not reduced. The longer crossing means that pedestrians are in the road for a longer period of time, which increases the chances of a vehicle and pedestrian conflict.

Alternative 2 includes the same painted crosswalk and signage as Alternative 1; however, the curb extensions in Alternative 2 shorten the distance of the crossing, which increases safety. The curb extensions are designed to provide 25 feet of space between the curbs at the narrowest point. This alternative was discussed with Jeff Williams, Public Works Director. Jeff noted that the Town's plows are 11 feet wide and that the proposed spacing between the curbs for this alternative would be sufficient for the Town plow trucks to plow the travel lanes without any disruption. There would be slightly more maintenance in the parking lane as the plows would need to maneuver around the curb extensions.

Based on the ROW mapping, both alternatives appear to require permanent easements along the west side of Bonnet Street. However, as there is an existing sidewalk in this location already, it is likely that the Town could make a declaration that the ROW is at the back of the existing sidewalk based on the fact that they have been maintaining the existing sidewalk for many years.

The "no build" alternative would not increase safety for pedestrians crossing Bonnet Street as there would be no improvement to the existing condition. As the "no build" alternative does not satisfy the Purpose and Need Statement, this alternative is not recommended.

TABLE 3
EVALUATION MATRIX
BONNET STREET ALTERNATIVES
MANCHESTER, VERMONT
March 31, 2016

Characteristic	**No Build**	**Alternative 1 40' Crossing**	**Alternative 2 25' Crossing**
Meet Purpose and Need	No	Yes	Yes
Safety Improvement	No	Minimal	Significant
Maintenance Requirements	No Change	Minimal	Minimal
Construction Cost	$0	$15,000	$25,000
Utility Relocation	No	No	No
Permanent Easements[1]	No	No	No

Notes:
1. Right-of-way determinations assume the right-of-way is centered on the road.

Main Street Crossing

Alternative 1

This alternative includes installing curb extensions with ADA compliant ramps and landings on both sides of Main Street, east of Memorial Avenue, with a painted crosswalk across Main Street, as shown in Figure 3. The curb extensions would be constructed with granite curb and concrete sidewalk. The crosswalk across Main Street would be approximately 22 feet long. Crosswalk signage would be installed at the crosswalk in both vehicular travel directions.

As part of this alternative, the three parking spaces on the north side of Main Street to the east of Memorial Avenue would be eliminated by installing new curb and a greenspace in the area that is currently designated for parking. Vehicles parked in these parking spaces currently prevent a driver traveling west on Main Street from seeing a pedestrian waiting on the north side of Main Street to cross the road. The combination of eliminating the parking spaces and installing a curb extension on the north side should make pedestrians much more visible to drivers traveling west.

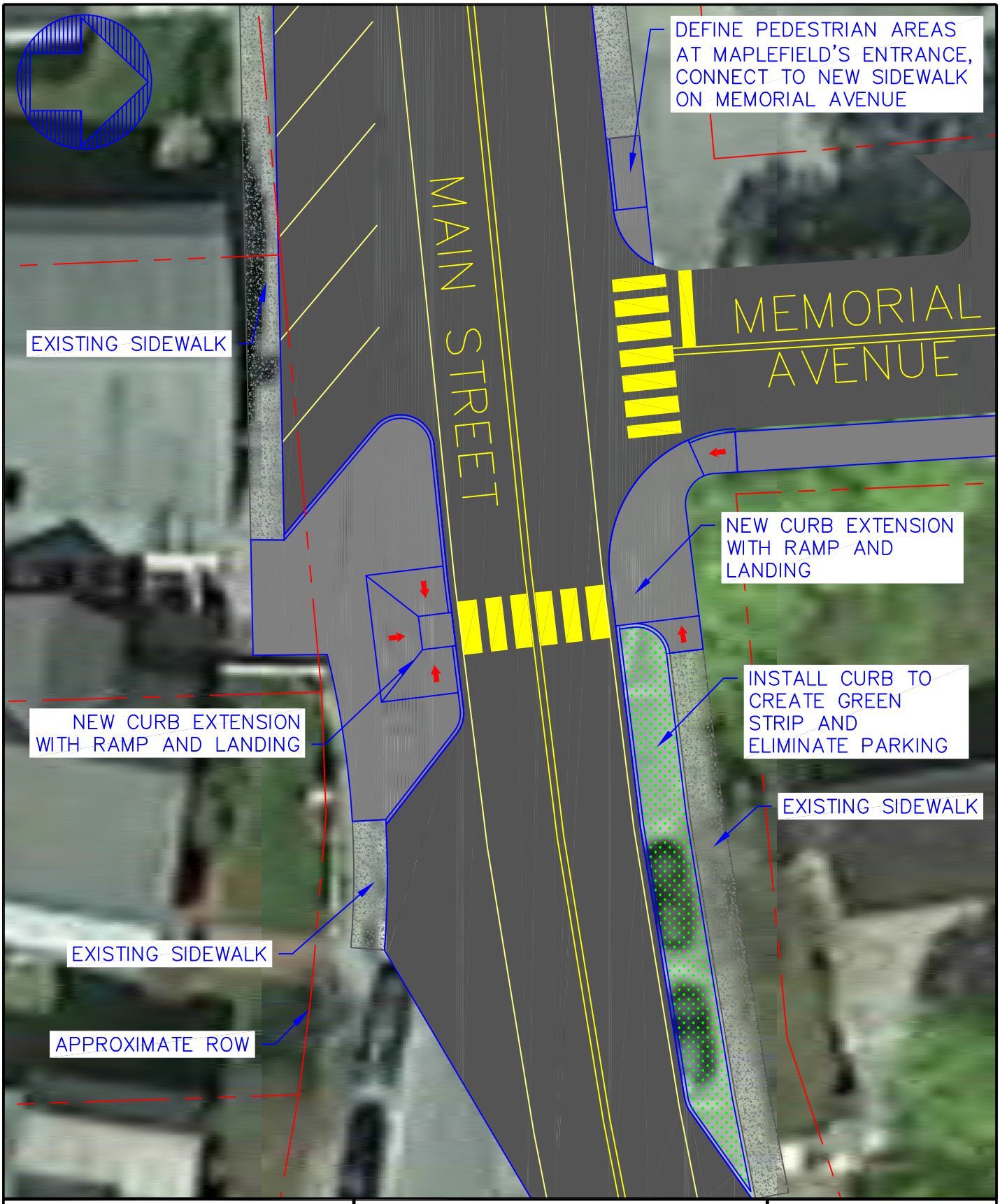

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FIGURE 3

MEMORIAL AVENUE AND MAIN STREET INTERSECTION ALTERNATIVE 1

MANCHESTER, VERMONT

PROJECT NO. 7140033
PROJECT MJR. CMH
SCALE 1"=20"
DATE MAR 2016
DRAWING NO. CONCEPT.DWG

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The preliminary construction cost estimate for this alternative is presented in Table 4. As shown, the preliminary construction cost estimate for Alternative 1 is $50,000 in 2016 dollars, which includes a 20% contingency.

TABLE 4
PRELIMINARY CONSTRUCTION COST ESTIMATE
MAIN STREET – ALTERNATIVE 1

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stump	LS	1	$ 500.00	$ 500.00
203.16	Solid Rock Excavation	CY	8	$ 60.00	$ 480.00
406.25	Bituminous Concrete Pavement	TON	8	$ 115.00	$ 920.00
618.30	Detectable Warning Surface	SF	30	$ 45.00	$ 1,350.00
630.10	Uniformed Traffic Officers	HR	50	$ 67.00	$ 3,350.00
630.15	Flaggers	HR	50	$ 27.00	$ 1,350.00
635.11	Mobilization/Demobilization	LS	1	$ 5,290.00	$ 5,290.00
641.10	Traffic Control	LS	1	$ 2,500.00	$ 2,500.00
646.500	Durable Crosswalk Marking	LF	24	$ 15.00	$ 360.00
675.20	Traffic Signs, Type A	SF	17	$ 15.00	$ 255.00
675.341	Square Tube Post and Anchor	LF	22	$ 10.00	$ 220.00
900.640	Granite Curb	LF	285	$ 25.00	$ 7,125.00
900.645	Class A Restoration of Growth	LS	1	$ 1,000.00	$ 1,000.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	170	$ 100.00	$ 17,000.00
	SubTotal Construction Cost				$ 41,700.00
	Contingencies (20%)				$ 8,300.00
	Total Construction Cost				**$ 50,000.00**

Notes:
1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

Alternative 2

This alternative includes installing the same components as Alternative 1, including the elimination of parking spaces on the north side of Main Street; however, the curb extension on the south side of Main Street would be extended further to the west, as shown in Figure 4. The extension to the west would provide sufficient space for a sidewalk as well as an outdoor seating area in front of the Cilantro Restaurant. This alternative would eliminate the two eastern parking spaces in front of the Cilantro Restaurant.

The curb extensions would be constructed with granite curb and concrete sidewalk. The crosswalk across Main Street would be the same length as Alternative 1. Crosswalk signage would be installed at the crosswalk in both vehicular travel directions.

The preliminary construction cost estimate for this alternative is presented in Table 5. As shown, the preliminary construction cost estimate for Alternative 2 is $63,000 in 2016 dollars, which includes a 20% contingency.

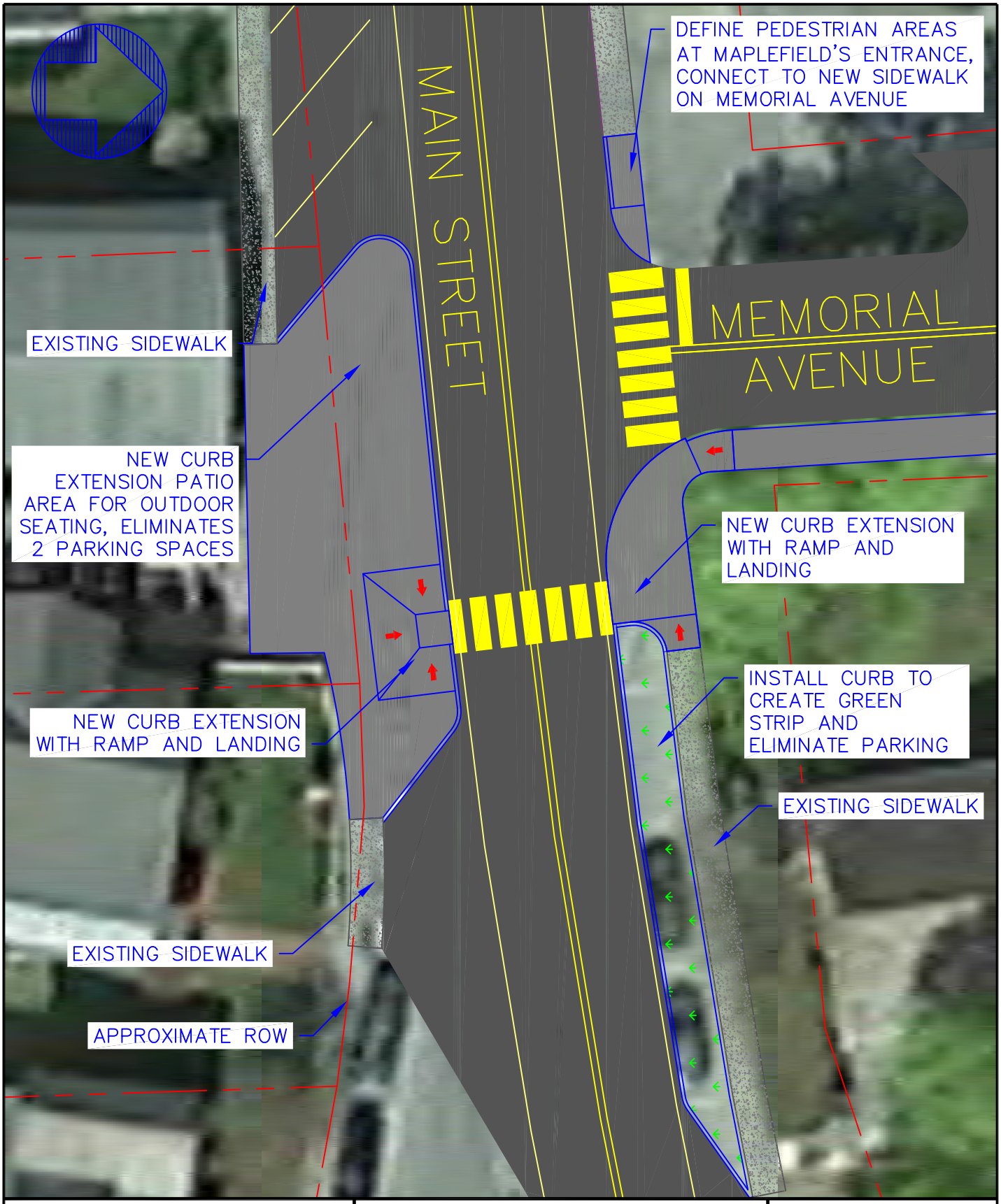

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FIGURE 4

MEMORIAL AVENUE AND
MAIN STREET INTERSECTION
ALTERNATIVE 2

MANCHESTER, VERMONT

PROJECT NO. 7140033
PROJECT MJR. CMH
SCALE 1"=20"
DATE MAR 2016
DRAWING NO. CONCEPT.DWG

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TABLE 5
PRELIMINARY CONSTRUCTION COST ESTIMATE
MAIN STREET – ALTERNATIVE 2
MANCHESTER, VERMONT

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stump	LS	1	$ 500.00	$ 500.00
203.16	Solid Rock Excavation	CY	11	$ 60.00	$ 660.00
406.25	Bituminous Concrete Pavement	TON	10	$ 115.00	$ 1,150.00
618.30	Detectable Warning Surface	SF	30	$ 45.00	$ 1,350.00
630.10	Uniformed Traffic Officers	HR	50	$ 67.00	$ 3,350.00
630.15	Flaggers	HR	50	$ 27.00	$ 1,350.00
635.11	Mobilization/Demobilization	LS	1	$ 6,805.00	$ 6,805.00
641.10	Traffic Control	LS	1	$ 2,500.00	$ 2,500.00
646.500	Durable Crosswalk Marking	LF	24	$ 15.00	$ 360.00
675.20	Traffic Signs, Type A	SF	17	$ 15.00	$ 255.00
675.341	Square Tube Post and Anchor	LF	22	$ 10.00	$ 220.00
900.640	Granite Curb	LF	312	$ 25.00	$ 7,800.00
900.645	Class A Restoration of Growth	LS	1	$ 1,000.00	$ 1,000.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	252	$ 100.00	$ 25,200.00
	SubTotal Construction Cost				$ 52,500.00
	Contingencies (20%)				$ 10,500.00
	Total Construction Cost				**$ 63,000.00**

Notes:
1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

Alternative Comparison

Alternative 1 and Alternative 2 both reduce the length of the pedestrian crossing on Main Street and make pedestrians more visible by eliminating parking spaces on the north side of Main Street. These are significant improvements over the existing conditions. The difference in alternatives is solely the creation of an outdoor seating area, which would provide a possible benefit to Cilantro.

The two alternatives were discussed with the owners of Cilantro and they indicated that they preferred Alternative 1. Cilantro utilizes an on-site septic system for their wastewater and the sizing of the septic system does not allow for any additional seating. As such, the parking spaces are more useful to their business than outdoor seating.

The curb extensions are designed to provide 24 feet of space between the curbs at the narrowest point. This alternative was discussed with Jeff Williams, Public Works Director. Jeff noted that the Town's plows are 11 feet wide and that the proposed spacing between the curbs for this alternative would be sufficient for the Town plow trucks to plow the travel lanes without any disruption. The curb extensions in this location do not create any additional maintenance for the plow trucks. The new greenspace on the north side of Main Street will require mowing.

Based on the ROW mapping, both alternatives appear to require permanent easements along the south side of Main Street. However, as there is an existing sidewalk in this location already, it is likely that the Town could make a declaration that the ROW is at the back of the existing sidewalk based on the fact that they have been maintaining the existing sidewalk for many years.

The "no build" alternative would not increase safety for pedestrians crossing Main Street as there would be no improvement to the existing condition. As the "no build" alternative does not satisfy the Purpose and Need Statement, this alternative is not recommended.

TABLE 6
EVALUATION MATRIX
MAIN STREET ALTERNATIVES
MANCHESTER, VERMONT

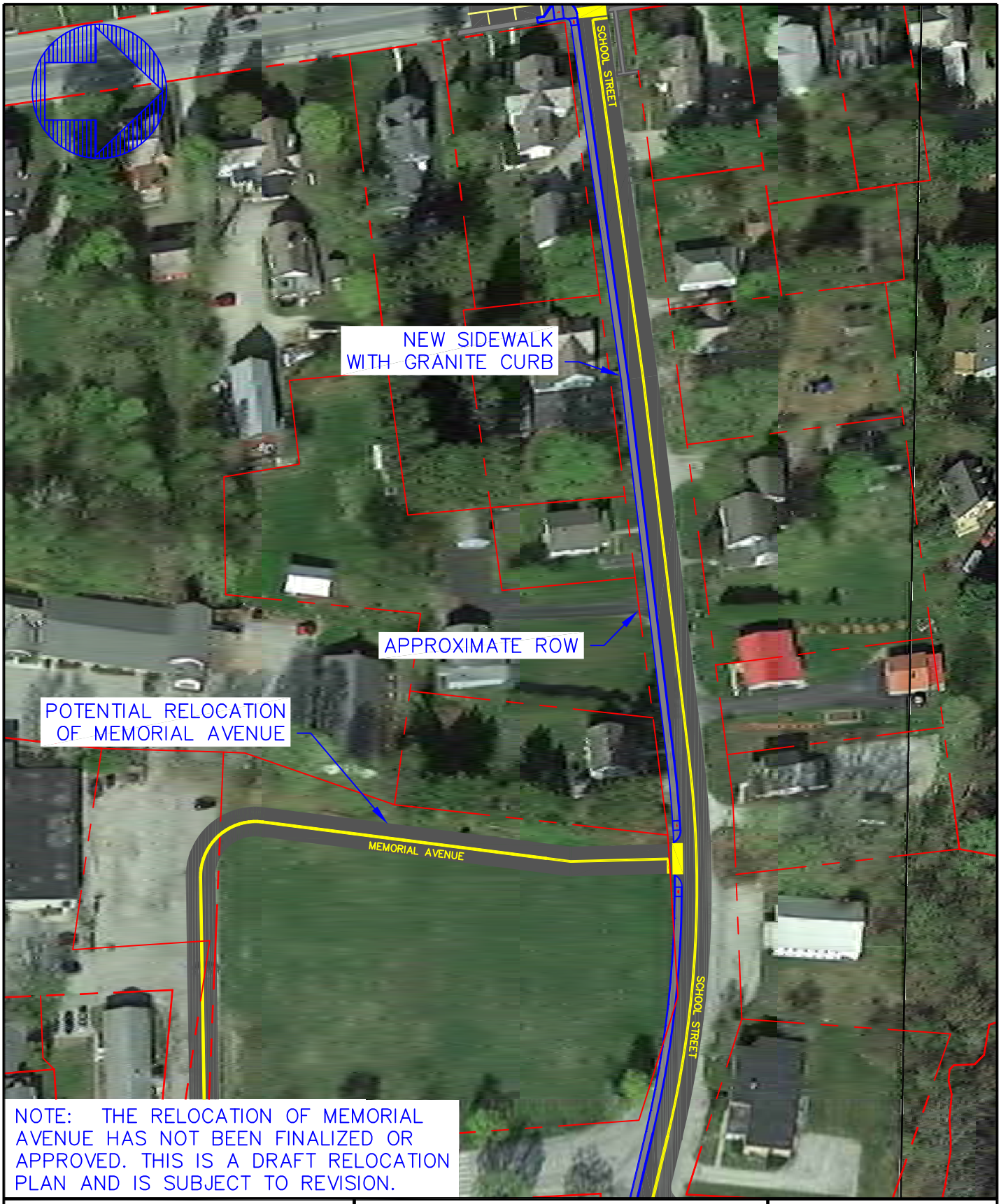
Characteristic	**No Build**	**Alternative 1 Curb Extensions**	**Alternative 2 Seating Area**
Meet Purpose and Need	No	Yes	Yes
Safety Improvement	No	Significant	Significant
Maintenance Requirements	No Change	Minimal	Minimal
Construction Cost	$0	$50,000	$63,000
Utility Relocation	No	No	No
Permanent Easements[1]	No	No	No

Notes:
1. Right-of-way determinations assume the right-of-way is centered on the road.

School Street Sidewalk

The portion of the project on School Street would include installing granite curb and concrete sidewalk along the south side of School Street, as shown in Figure 5. The south side of School Street was chosen for the new sidewalk because there are far fewer obstructions on the south side compared to on the north side of the street. Most of the utility poles are located on the north side of School Street. In addition, there is a stone retaining wall on the north side of the street in front of 39 School Street.

The Town is considering reconfiguring the School Street and Memorial Avenue intersection. The reconfiguration would move Memorial Avenue to the west side of the school's recreational field. This would eliminate the large radius curve that currently exists and reduce vehicle speeds at the intersection of the two streets. With the reconfigured streets, a sidewalk on the south side of School Street would lead directly to the MEMS entrance. The only street crossing along School Street would be the newly reconfigured Memorial Avenue. This crossing would be at a stop sign controlled intersection.



NOTE: THE RELOCATION OF MEMORIAL AVENUE HAS NOT BEEN FINALIZED OR APPROVED. THIS IS A DRAFT RELOCATION PLAN AND IS SUBJECT TO REVISION.

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FIGURE 5

SCHOOL STREET ALTERNATIVE 1

MANCHESTER, VERMONT

PROJECT NO. 7140033
PROJECT MJR. CMH
SCALE 1"=100"
DATE MAR 2016
DRAWING NO. CONCEPT.DWG

FILE: M:\CADD Files\Manchester VT\Civil Projects\MEMS\Concept 3.dwg Mar 31, 2016 - 3:28pm

There is one utility pole on the south side of the street at the eastern side of 152 Bonnet Street that may require relocation.

The preliminary construction cost estimate for this alternative is presented in Table 7. As shown, the preliminary construction cost estimate for Alternative 1 is $204,000 in 2016 dollars, which includes a 20% contingency.

TABLE 7
PRELIMINARY CONSTRUCTION COST ESTIMATE
SCHOOL STREET – ALTERNATIVE 1
MANCHESTER, VERMONT
March 31, 2016

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stump	LS	1	$ 2,000.00	$ 2,000.00
406.25	Bituminous Concrete Pavement	TON	35	$ 115.00	$ 4,025.00
617.10	Relocate Mailbox, Single Support	EA	2	$ 240.00	$ 480.00
618.30	Detectable Warning Surface	SF	20	$ 45.00	$ 900.00
630.10	Uniformed Traffic Officers	HR	50	$ 67.00	$ 3,350.00
630.15	Flaggers	HR	50	$ 27.00	$ 1,350.00
635.11	Mobilization/Demobilization	LS	1	$ 21,950.00	$ 21,950.00
641.10	Traffic Control	LS	1	$ 3,000.00	$ 3,000.00
646.500	Durable Crosswalk Marking	LF	24	$ 15.00	$ 360.00
675.20	Traffic Signs, Type A	SF	7	$ 15.00	$ 105.00
675.341	Square Tube Post and Anchor	LF	11	$ 10.00	$ 110.00
675.50	Removing Signs	EA	2	$ 10.00	$ 20.00
900.620	Drop Inlet	EA	4	$ 3,650.00	$ 14,600.00
900.640	Granite Curb	LF	870	$ 25.00	$ 21,750.00
900.640	Storm Drain Pipe	LF	700	$ 60.00	$ 42,000.00
900.645	Class A Restoration of Growth	LS	1	$ 4,830.00	$ 4,830.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	435	$ 100.00	$ 43,500.00
900.675	Portland Cement Concrete Sidewalk, 8 inch	SY	54	$ 105.00	$ 5,670.00
	SubTotal Construction Cost				$ 170,000.00
	Contingencies (20%)				$ 34,000.00
	Total Construction Cost				**$ 204,000.00**

Notes:
1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

Alternative Comparison

As discussed above, it would be much more difficult to install a sidewalk on the north side of School Street due to the various obstructions. A new sidewalk on the south side of School Street is much more feasible and provides direct access to the front door of MEMS.

Maintenance requirements for the new sidewalk on School Street are primarily the need for plowing.

Based on the ROW mapping, Alternative 1 appears to require a permanent easement along the south side of School Street along the recreation field in front of MEMS. As this property is owned by MEMS and the sidewalk is a benefit to MEMS, it is likely that a permanent easement would be granted by MEMS.

The "no build" alternative would not increase safety for pedestrians on School Street as there would be no improvement to the existing condition. As the "no build" alternative does not satisfy the Purpose and Need Statement, this alternative is not recommended.

An evaluation matrix was prepared to compare the alternatives and is presented in Table 8.

TABLE 8
EVALUATION MATRIX
BONNET STREET – ALTERNATIVE 1
MANCHESTER, VERMONT

Characteristic	**No Build**	**Alternative 1 Sidewalk on South Side**
Meet Purpose and Need	No	Yes
Safety Improvement	No	Significant
Maintenance Requirements	No Change	Seasonal (Plowing)
Construction Cost	$0	$204,000
Utility Relocation	No	Minimal
Permanent Easements[1]	No	Yes (1)

Notes:
1. Right-of-way determinations assume the right-of-way is centered on the road.

Preferred Alternative

Based on input from the public and the steering committee, the following components for each location have been identified as the preferred alternative:

- Bonnet Street Crossing: Alternative 2 – curb extensions
- Main Street Crossing: Alternative 1 – curb extensions with no seating area
- School Street: Alternative 1 – new sidewalk on the south side of School Street

Permitting Requirements

These types of projects do not typically require significant permitting. The permitting requirements for the preferred alternative are shown in Table 9.

If Federal funding is utilized, an environmental analysis will be required in accordance with the National Environmental Policy Act (NEPA). It is likely that the project would qualify for a Categorical Exclusion as it is not anticipated to have a significant effect upon natural and cultural resources, nor a significant environmental impact.

TABLE 9
PERMITTING REQUIREMENTS
MANCHESTER, VERMONT
March 31, 2016

Permit or Approval	Preferred Alternative
Act 250	No
Construction General Permit	No
Fish and Wildlife Division	No
Stream Alteration	No
Stormwater Discharge Permit	No
19 VSA 1111 Access Permit	No
Wetland Permit	No
Town Highway Permit	Yes

Total Project Cost Estimate

The preliminary construction cost estimate presented in Table 10 has been prepared for the preferred alternative as described previously in this section. As shown, the preliminary construction cost estimate is $279,000 in 2016 dollars, which includes a 20% contingency.

Table 11 presents the total project costs for the preferred alternative. The total project cost is estimated at $360,000 based on a construction cost of $279,000 in 2016.

TABLE 10
CONSTRUCTION COST ESTIMATE
MANCHESTER, VT
MARCH 31, 2016

Item Number	Item Description	Unit	Quantity	Unit Price	Total Price
201.10	Clearing and Grubbing, Including Individual Trees and Stump	LS	1	$ 3,000.00	$ 3,000.00
203.16	Solid Rock Excavation	CY	12	$ 60.00	$ 720.00
406.25	Bituminous Concrete Pavement	TON	46	$ 115.00	$ 5,290.00
617.10	Relocate Mailbox, Single Support	EA	2	$ 240.00	$ 480.00
618.30	Detectable Warning Surface	SF	70	$ 45.00	$ 3,150.00
630.10	Uniformed Traffic Officers	HR	150	$ 67.00	$ 10,050.00
630.15	Flaggers	HR	150	$ 27.00	$ 4,050.00
635.11	Mobilization/Demobilization	LS	1	$ 29,850.00	$ 29,850.00
641.10	Traffic Control	LS	1	$ 8,000.00	$ 8,000.00
646.500	Durable Crosswalk Marking	LF	73	$ 15.00	$ 1,095.00
675.20	Traffic Signs, Type A	SF	49	$ 15.00	$ 735.00
675.341	Square Tube Post and Anchor	LF	66	$ 10.00	$ 660.00
675.50	Removing Signs	EA	2	$ 10.00	$ 20.00
900.620	Drop Inlet	EA	4	$ 3,650.00	$ 14,600.00
900.640	Granite Curb	LF	1216	$ 25.00	$ 30,400.00
900.640	Storm Drain Pipe	LF	700	$ 60.00	$ 42,000.00
900.645	Class A Restoration of Growth	LS	1	$ 6,330.00	$ 6,330.00
900.675	Portland Cement Concrete Sidewalk, 5 inch	SY	664	$ 100.00	$ 66,400.00
900.675	Portland Cement Concrete Sidewalk, 8 inch	SY	54	$ 105.00	$ 5,670.00
	SubTotal Construction Cost				$ 232,500.00
	Contingencies (20%)				$ 46,500.00
	Total Construction Cost				**$ 279,000.00**

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates. Contingencies are based on approximately 20% of the construction cost at the preliminary planning stage.
2. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.
3. The sidewalk item includes all excavation, subbase gravels and concrete sidewalk.

TABLE 11
TOTAL PROJECT COST ESTIMATE
MANCHESTER, VT
MARCH 31, 2016

Item Description	Total Price
Bonnet Street Crossing - Alternative 2	$ 20,800.00
Main Street Crossing - Alternative 1	$ 41,700.00
School Street Sidewalk - Alternative 1	$ 170,000.00
SubTotal Construction Cost	$ 232,500.00
Contingencies (20%)	$ 46,500.00
Total Construction Cost	**$ 279,000.00**
Design Engineering	$ 46,500.00
Construction Engineering	$ 34,500.00
Total Project Cost	**$ 360,000.00**

Notes:

1. Construction costs are preliminary and are not based on detailed plans and specifications. Actual cost may vary substantially from these estimates.
2. Design engineering costs are estimated at 20% of the construction cost.
3. Construction engineering costs are estimated at 15% of the construction cost.
4. There are no Local Project Management costs included in the total project cost estimate as it is assumed the Town of Manchester will provide these services.
5. The Engineering News Record Construction Cost Index was 10,242 when the cost estimate was completed in March 2016.

Public Involvement

Two public meetings were held regarding the scoping study. A local concerns meeting was held May 20th, 2015, and an alternatives presentation was held on January 6, 2016. (see Appendix, Public Comments).

All abutting property owners received invitations to the meetings, and most attended. The meetings were also posted in the Town Office and in the Manchester Journal.

Compatibility with Town and Regional Plans

The proposed pedestrian improvements are consistent with the *Manchester Town Plan* (adopted 2012) and the *Bennington County Regional Plan* (adopted March 2015). *The Town Plan* cites the need for pedestrian infrastructure, noting that, "Pedestrian pathways and crosswalks should be provided at appropriate locations" (page 22). And, "Rather than design streets for the convenience of vehicular travel, we design primarily for the convenience of people. This includes…a safe and convenient sidewalk network, safe and well-marked crosswalks…"(page 26).

The Regional Plan states walking is a mode to be supported. "Walking should be considered as both a primary means of transportation…In addition to being simple and convenient, walking is very energy efficient, results in no emissions, and is an enjoyable and healthy activity (page 146). Also, sidewalks must provide connections to schools, employment centers, and shopping areas" (page 147).

The Regional Transportation Plan lists "Manchester Elementary Middle School Safe Routes to School Project: Construction of a new sidewalk on School Street and improved pedestrian crossing at the intersection of Main Street and Memorial Avenue" under "Priority Walking and Bicycling Improvement Projects (page 27).

Project Timeline

The typical time to design and construct a bicycle and pedestrian project using federal/state funds, administered through the VTrans Municipal Assistance Bureau (MAB), is 3-5 years. The Bureau's timeline template shows a typical project completion time of 41 months.

The project schedule (as a federal/state funded project)

Scoping Study approved by Town	June, 2016
Submit funding application to VTrans	July, 2016
Receive grant approval	August, 2016
Grant Agreement executed	October, 2016

Procure design services	December, 2016
Project design/review/permitting/VTrans approvals/ROW acquisition	February, 2017 – April, 2020
Proposal for contractor/advertisement/award	April, 2020
Begin construction	May, 2020

VIABILITY

The project is viable, feasible, and would create significant public value for a relatively modest cost.

- The project creates a safe and inviting pedestrian route to the Manchester Elementary Middle School.
- The need for the project is identified in Town and Regional Planning Documents and by the school's Safe Routes to School Travel Plan
- Public comments recognized the need for the project and were supportive of the preferred alternative.
- There do not appear to be any significant ROW obstacles.
- The preferred alternative would not create any negative impacts to natural or cultural resources and there do not appear to any significant permitting issues.

Arlington Schools to Recreation Park Pathway

Local Concerns Meeting

May 20, 2015

Approximately 48 people in attendance
Presenters:

- Mark Anders, BCRC
- Christina Haskins, Dufresne Group Engineers
- John O'Keefe, Town of Manchester

Public Comments

Sylvia Jolivette - Questions about the size of the Bicycle Pedestrian Grant. Comments that she doesn't have trouble walking the area. Thinks the homes on School Street don't have much frontage and will be infringed upon. Claims the current sidewalk plows will take up the lawn.

Ben Beers - Commented that kids walk in the road during the winter. Believes they would be much safer on a sidewalk.

Joan Rizzio - Stated that there were few kids walking to school and few bicycles. We should have sidewalks but crossing guards work at the intersection, improvements unnecessary.

Jamie Kunish - wants her kids to ride bicycles to school. Would like to see a sidewalk.

Katy McNabb - believes the school street hill is dangerous if kids are in the street because it blocks driver's view of kids. Also there is no crossing guard at intersection in the morning. Cars don't slow down or stop. Removing parking to make it more visible would make it safer.

Kenny Koon - agrees the peak on School Street is dangerous for kids walking in the street.

Frank Sutton - has seen few students walking on School Street over the years. Thinks it will be hard to find room for a sidewalk on School Street. Would there still be enough room on the road for traffic to continue moving both directions? A traffic officer would alleviate the problem of the crossing at Main Street.

Kathy Boudreau - thinks that we need crosswalks. Wondered about the demographics of where kids are coming from.

Bruce - wondering about the corner of Memorial and Main, if busses and trucks could still make the turn if we bumped out the curb without blowing out their tires. Maybe a sloped curb would work better?

Claudia Boudreau - where would the property come from to do a sidewalk? Would the town take care of the snow removal on the sidewalk?

Greg Haring - what about the water main through School Street?

Alberta Harrington - says kids don't walk facing traffic. Feels the kids need to be educated on safe walking and biking.

Lila Pellerin - wants her kids to be able to walk to school but doesn't feel it is currently safe near the school. The kids would like to walk if it's safe.

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Memo

To: Meeting Attendees

From: Christina Haskins, PE

Date: January 26, 2016

Re: MEMS Pedestrian Access Scoping Study – Alternatives Presentation

---

On January 6, 2016, an Alternatives Presentation Meeting was held at the Manchester Elementary and Middle School (MEMS) to discuss the proposed work. The following individuals attended:

Individual	Representing
John O'Keefe	Town of Manchester, Town Manager
Janet Hurley	Town of Manchester, Zoning Administrator
Brian Vogel	MEMS School Board, Chair
Tom Quinn	MEMS, Principal
Carol Baringer	MEMS, Committee Member
Gary Mears	MEMS, Committee Member
Mark Anders	Bennington County Regional Commission
Chrissy Haskins, PE	Dufresne Group

Approximately 30 Members of the Public

I have prepared the following summary of my notes taken at the meeting:

1. John and Brian began the meeting with introductions and a brief project history.
2. John summarized the entire project, which includes multiple smaller projects (MEMS Pedestrian Access Scoping Study, MEMS Reconfiguration, Playground Upgrade).
3. John reviewed the details of the MEMS Pedestrian Access Scoping Study project and reviewed concerns noted at the previous public meeting.
4. Chrissy presented the alternatives for the School Street sidewalk, Bonnet Street crossing and Main Street crossing.
5. The meeting was opened to public comment in regard to the MEMS Pedestrian Access project (the local reconfiguration project had a separate public comment session).
    a. Bruce Fielding noted that the turning radius from Main Street to Memorial needs to accommodate larger trucks and busses.

    i. Chrissy responded that the radius will be designed for a larger truck or bus. The radius shown in the sketch was about 30 feet, which should accommodate the larger trucks and busses that travel through the area.

b. A local resident asked if "school" signs with blinking lights could be installed on Bonnet Street.
    i. John responded that MUTCD governs all signage and the team would look into this suggestion.
c. Bernie Boudreau asked about the purpose of alternative 2 for Main Street (larger patio area in front of Cilantro) and if this larger area increased safety at all.
    i. John responded that it was purely aesthetic and it would extend the appearance of the "downtown" area from the Thai Basil area to Cilantro.
    ii. Mark followed up that alternative 2 is an opportunity for Cilantro.
d. Frank Sutton noted that delivery trucks park in front of Cilantro regularly and they may not want to lose the parking spaces.
    i. John agreed and noted that he was waiting for a response from Cilantro on their preference.
e. Dave Madcourth stated that the two eastern spots on the northeastern side of the Main/Memorial intersection do not interfere with visibility and should not be eliminated. Dave suggested adding a sign indicating "School" crosswalk, noting that it is documented that vehicles will slow down when these signs are present. Dave also noted that the western spot was handicap parking.
    i. John suggested that the handicap spot was not ideal at that location.
f. Sylvia Jolivette agreed that the handicap spot should remain and added that there should not be any curb extensions anywhere and the sidewalk on School Street was not necessary.
g. Sylvia Jolivette stated that the Main Street intersection was a good road condition and no change was needed. Sylvia also suggested that people should cross at Rite Aid where it is safer.
    i. Katy McNabb noted that most people do not know where the "safest" locations to cross are and that the intersection needs to work for everyone.
h. Skip King noted that he thought alternative 2 on Main Street would be better for handicap access. Skip added that curb extensions are better as they minimize the crossing distance. Skip also noted that when a person is trying to cross Main Street from the north to the south, it is difficult for vehicles to see them due to the parking spots, especially when in a wheelchair (or at the height of a child). Currently, Skip needs to get out into the road to be seen and then people don't stop to allow him to cross.
i. Sylvia Jolivette restated that no sidewalk was necessary on School Street. Sylvia suggested that painting a white line on the road would be good for pedestrian and bicycle traffic.

j. Beth Whittaker noted that the parking spots on the northeast corner of Main/Memorial intersection are a problem for both drivers (pulling out of Memorial) and pedestrians. Beth added that there needs to be better signage at crosswalks, noting that a yellow sign on a pole and a painted crosswalk was not enough. Beth suggested placing a sign in the road (center of crosswalk) and painted words on the road.
    i. John responded that the plan does not show signage yet. The crosswalk sign will go in the greenspace, so it will be closer to the edge of the road then it currently is.
    ii. Skip King noted that signs in the road get run over.
    iii. Dave Madcourth noted that the signs got run over previously because no one took them down at night.
    iv. John commented that a splitter island with permanent signs may be an option.
k. Kathy O'Reilly agreed with the splitter island idea and asked if lighting could be installed in the road (in the pavement).
    i. Mark responded that lighting in the road is tough during winter conditions.
l. Bill Eckland commented that he likes the ideas presented and noted that the priority was keeping children safe. He agreed with limiting the distance of crosswalks, thereby limiting the amount of time a person is in the road. Bill noted that drivers often don't stop for crosswalks. Bill added that the crosswalks and signs in the road won't work alone. Bill asked if the crosswalk at Main could be moved east.
    i. John responded that the team would look at moving the crosswalk east.
m. A local resident noted that alternative 2 for Main Street may create visual distractions. A seating area may add more distractions.
n. Alberta Harrington noted that a sidewalk on School Street would create blind spots and infringe on private property.

6. John and Brian closed the public comment session for the MEMS Pedestrian Access Scoping Study to continue with the next phase of the meeting (MEMS Reconfiguration), which is documented in separate minutes.